

BRUHATH BANGALORE MAHANAGARA PALIKE

Name of the Agency : **Mr. Ramsingh Chandra Naik**, Contractor,
Bangalore.

Name of the Work : Improvements to Roads, Drains and Asphaltting
to roads in Vinayaka Layout 1st Cross & 2nd
Cross, 2nd Stage in Ward No.07, Byatarayanapura,
BBMP, Bangalore.

Estimate Cost : Rs.

QUALITY CONTROL REPORTS TO

**Asst. Executive Engineer,
Kodigehalli Sub Division,
BBMP, Bangalore.**

CIVIL-TECH CONSULTANTS & ENGINEERS

**Building & Highway Material Testing Laboratory
NABL ACCREDITED LABORATORY AS PER ISO / IEC - 17025:2005
No.23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara,
Basaveshwaranagar, Bangalore - 560 079.**

**QUALITY CONTROL REPORTS FOR
CIVIL WORKS**



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Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005



Job No.: CTCE/BBMP/W.No07/RSCN/CEMENT/2014-15



Date: 02.06.2014

TEST REPORT

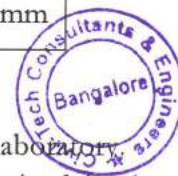
CLIENT	:	Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
AGENCY	:	Mr. Ramsingh Chandra Naik, Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1 st Cross & 2 nd Cross, 2 nd Stage in Ward No.07, Byatarayanapura, BBMP, Bangalore.
REFERENCE	:	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 1989-2013
1	Standard Consistency	IS-4031 (Part -4)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	485 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

Note:

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Job No.: CTCE/BBMP/W.No07/RSCN/SAND/2014-15

: 02.06.2014



TEST REPORT ON FINE AGGREGATES IS 383-1970 (RA- 2002)

Client : Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Agency : Mr. Ramsingh Chandra Naik, Contractor, Bangalore.

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Reference : EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013

Date of Testing : 02.06.2014

Material : Sand

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	52	5.20	5.20	94.8	90-100
2.36	156	15.60	20.80	79.2	75-100
1.18	185	18.50	39.30	60.7	55-90
600 Micron	210	21.00	60.30	39.7	35-59
300 Micron	235	23.50	83.80	16.2	8-30
150 Micron	110	11.00	94.80	5.2	0-10

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**QUALITY CONTROL REPORTS FOR
WET MIX MACADAM**



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Job No.: CTCE/BBMP/W.No07/RSCN/WMM/Gradation/2014-15

09.06.2014



GRADATION FOR WMM

MORTH TABLE-400-11

Client : Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.

Agency : Mr. Ramsingh Chandra Naik, Contractor, Bangalore.

Name of Work : Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1st Cross & 2nd Cross, 2nd Stage in Ward No.07, Byatarayanapura, BBMP, Bangalore.

Reference : EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013

Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 7835

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	150	150	1.9	98.1	95-100
22.4	2515	2665	34.0	66.0	60-80
11.2	1285	3950	50.4	49.6	40-60
4.75	1050	5000	63.8	36.2	25-40
2.36	980	5980	76.3	23.7	15-30
0.600	855	6835	87.2	12.8	8-22
0.075	650	7485	95.5	4.5	0-8

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Reference : EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013

Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8450

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	190	190	2.2	97.8	95-100
22.4	2680	2870	34.0	66.0	60-80
11.2	1255	4125	48.8	51.2	40-60
4.75	1125	5250	62.1	37.9	25-40
2.36	985	6235	73.8	26.2	15-30
0.600	865	7100	84.0	16.0	8-22
0.075	850	7950	94.1	5.9	0-8

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Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8275

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	135	135	1.6	98.4	95-100
22.4	2585	2720	32.9	67.1	60-80
11.2	1290	4010	48.5	51.5	40-60
4.75	1130	5140	62.1	37.9	25-40
2.36	965	6105	73.8	26.2	15-30
0.600	835	6940	83.9	16.1	8-22
0.075	825	7765	93.8	6.2	0-8

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Reference : EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013

Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8300

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	185	185	2.2	97.8	95-100
22.4	2505	2690	32.4	67.6	60-80
11.2	1210	3900	47.0	53.0	40-60
4.75	1195	5095	61.4	38.6	25-40
2.36	985	6080	73.3	26.7	15-30
0.600	875	6955	83.8	16.2	8-22
0.075	835	7790	93.9	6.1	0-8

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Date of Testing : 09.06.2014

Material : WMM

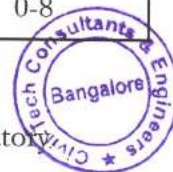
Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 8145

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	195	195	2.4	97.6	95-100
22.4	2650	2845	34.9	65.1	60-80
11.2	1185	4030	49.5	50.5	40-60
4.75	1085	5115	62.8	37.2	25-40
2.36	995	6110	75.0	25.0	15-30
0.600	860	6970	85.6	14.4	8-22
0.075	825	7795	95.7	4.3	0-8

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Reference : EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013

Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 7650

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	145	145	1.9	98.1	95-100
22.4	2450	2595	33.9	66.1	60-80
11.2	1210	3805	49.7	50.3	40-60
4.75	1005	4810	62.9	37.1	25-40
2.36	965	5775	75.5	24.5	15-30
0.600	825	6600	86.3	13.7	8-22
0.075	800	7400	96.7	3.3	0-8

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Date of Testing : 09.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 7890

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	210	210	2.7	97.3	95-100
22.4	2565	2775	35.2	64.8	60-80
11.2	1185	3960	50.2	49.8	40-60
4.75	1105	5065	64.2	35.8	25-40
2.36	990	6055	76.7	23.3	15-30
0.600	835	6890	87.3	12.7	8-22
-0.075	750	7640	96.8	3.2	0-8

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Aggregate Impact Value

IS: 2386 Part IV

Client	Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
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Name of the Work	Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1st Cross & 2nd Cross , 2nd Stage in Ward No.07, Byatarayanapura, BBMP,
Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	09.06.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	390	22.34
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	86	88	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	303	302	
4	Aggregate Impact value = percent fines	22.11	22.56	
	$100 * (W_2 / W_1) \%$			

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Aggregate Impact Value

IS: 2386 Part IV

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Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	09.06.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	395	396	23.14
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	94	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	307	
4	Aggregate Impact value = percent fines	23.80	22.47	
	$100 * (W_2/W_1) \%$			

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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IS: 2386 Part IV

Client	Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	Mr. Ramsingh Chandra Naik, Contractor, Bangalore.
Name of the Work	Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1st Cross & 2nd Cross , 2nd Stage in Ward No.07, Byatarayanapura, BBMP,
Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	09.06.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	389	390	22.72
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	88	89	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines	22.62	22.82	
	$100 * (W_2/W_1) \%$			

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

Note:

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 # 23/14, 7th Cross, 3rd Stage,
 4th Block, Shakthiganapathinagara,
 Basaveshwaranagar,
 Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.

Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com



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09.06.2014

Aggregate Impact Value

IS: 2386 Part IV

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Agency	Mr. Ramsingh Chandra Naik, Contractor, Bangalore.
Name of the Work	Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1st Cross & 2nd Cross , 2nd Stage in Ward No.07, Byatarayanapura, BBMP,
Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	09.06.2014

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	393	394	23.76
2	Weight of aggregate passing 2.36 mm sieve after the test = W_2 g	93	94	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines	23.66	23.86	
	$100 * (W_2 / W_1) \%$			

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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09.06.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	Asst. Executive Engineer, Kodigehalli Sub Division, BBMP, Bangalore.
Agency	Mr. Ramsingh Chandra Naik, Contractor, Bangalore.
Name of Work	Improvements to Roads, Drains and Asphaltting to roads in Vinayaka Layout 1st Cross & 2nd Cross , 2nd Stage in Ward No.07, Byatarayanapura, BBMP, Bangalore.
Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	09.06.2014



Result : Flakiness Index = 12.35%

Elongation Index = 13.10%

Result : Combined Flakiness & Elongation index 25.45%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	09.06.2014



Result : Flakiness Index = 12.32%

Elongation Index = 13.25%

Result : Combined Flakiness & Elongation index 25.57%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

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Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
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Type of Mix	Wet Mix Macadam
Date of Testing	09.06.2014



Result : Flakiness Index = 11.55%

Elongation Index = 13.28%

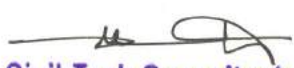
Result : Combined Flakiness & Elongation index 24.83%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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Reference	EE/BTP/BBMP-E-PMT/157/2013-14 Dated: 09.10.2013
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	09.06.2014



Result : Flakiness Index = 11.56%

Elongation Index = 13.23%

Result : Combined Flakiness & Elongation index 24.79%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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